



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,514	05/01/2006	Naoshi Masukawa	124639	2015
25944 7590 03/13/2009 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
O HERN, BRENT T				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
03/13/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/541,514

**Applicant(s)**

MASUKAWA ET AL.

**Examiner**

Brent T. O'Hern

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-9 is/are pending in the application.
- 4a) Of the above claim(s) 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Claims

1. Claims 1 and 3-9 are pending with claim 9 withdrawn.

## WITHDRAWN REJECTIONS

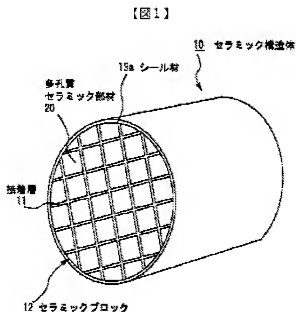
2. All rejections of record in the Office action mailed 16 October 2008, pages 2-3, paragraph 2 have been withdrawn due to Applicant's amendments in the Paper filed 15 January 2009.

## NEW REJECTIONS

### Claim Rejections - 35 USC § 102/103

3. Claims 1 and 3-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshida (JP 2002085922).

Yoshida ('922) teaches a honeycomb structure (*See Drawing #1.*)



comprising a plurality of honeycomb segments partitioned by partition walls and having a plurality of circulation holes penetrating in one axial direction; and a bonding layer existing between the adjacent honeycomb segments for bonding the plurality of honeycomb segments, wherein the bonding layer is formed by use of a bonding material including oxide fibers, inorganic particles; and a colloidal oxide with the fibers satisfying the following relational expression (1),

$$1.0 \leq L \times (W/D)/100 \leq 7.3 \quad (1)$$

in which L is an average length ( $\mu\text{m}$ ) of the oxide fibers in a longitudinal direction in a range from 10 to 100  $\mu\text{m}$ , D is specific gravity ( $\text{g}/\text{cm}^3$ ) of the oxide fibers, and W is mass percentage of content (% by mass) of the oxide fibers in the entire bonding material/(the bonding material), and an average diameter d in a cross-section perpendicular to the longitudinal direction is set in a range from 1 to 20  $\mu\text{m}$ , wherein mass percentage of the oxide fibers having a shape defined as  $0.5 \leq (\text{a diameter of a cross section perpendicular to the longitudinal direction})/(\text{a length in the longitudinal direction}) \leq 1$  is set equal to or below 50% by mass in the oxide fibers, and the W is set in a range from 10% to 50% by mass, with a plurality of honeycomb segments partitioned by partition walls and having a plurality of circulation holes penetrating in one axial direction; and a bonding layer existing between the adjacent honeycomb segments for bonding the plurality of honeycomb segments, wherein the honeycomb segment comprises any of silicon carbide and a silicon-silicon carbide compound material as a main ingredient (*See paras. 16, 30, 44-60, 89 and Drawing #1, ceramic structure #10, with sealant #13a and porous member #20. Furthermore, see p. 6, para. 1 of*

*Applicant's Paper filed 15 January 2009 where Applicant admits that Yoshida ('922) anticipates the claims with  $L \times (W/D)/100$  being less than 30 and greater than 0.0625 which clearly encompasses the above claimed range. Furthermore, Applicant does not assert or provide any evidence that Yoshida's ('922) above value must be greater than 7.3 or less than 1.0. Whether or not portions of the range may or may not provide better performance does not make Applicant's invention patentable over a product already known in the prior art.)* and inherently teaches a heat conductivity of the bonding layer being in a range from 0.1 to 5 W/mK since the composition is the same. In the alternative, a person having ordinary skill in the art would obviously appreciate or provide a bonding layer with the above heat conductivity in order to provide effective heat transfer without deterioration of the bonding strength. Thus, a rejection under 35 USC 102/103 is proper (*See MPEP 2112.*).

#### **ANSWERS TO APPLICANT'S ARGUMENTS**

4. Applicant's admission (*p. 5, para. 9 to p. 6, para. 1 of Applicant's Paper filed 15 January 2009*), thus, Yoshida ('922) anticipates Applicant's claims because Yoshida ('922) teaches the entire range per equation (1) of claim #1 is noted.

5. In response to Applicant's arguments (*p. 5, paras. 5-7 of Applicant's Paper filed 15 January 2009*) that since Yoshida ('922) "does not always teach Applicant's invention" since Yoshida ('922) also teaches products having physical properties that are different then Yoshida ('922) can not teach Applicant's claims, it is noted that this does not make sense and is not consistent with the law. Patentability of an invention over the prior art is not based on the additional teachings of a reference that may be

different than what is claimed but rather whether the prior teaches what is claimed. As Applicant admits, Yoshida ('922) teaches all of the limitations of Applicant's product.

6. In response to Applicant's arguments (*p. 6, para. 2 to p. 7, para. 1 of Applicant's Paper filed 15 January 2009*) since Yoshida ('922) does not recognize the criticality of Applicant's range and different compositions provide a product with different properties then Yoshida ('922) can not teach the claims, it is noted that Applicant does not set forth any unexpected results of its' composition. Furthermore, there is not anything unexpected about different compositions having different properties since no two products will have identical properties unless the products are identical. Furthermore, as discussed above, Yoshida ('922) teaches providing a bonding layer with the above heat conductivity in order to provide effective heat transfer without deterioration of the bonding strength.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on (571) 272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BTO/  
Brent T. O'Hern  
Examiner  
Art Unit 1794  
March 5, 2009

/Elizabeth M. Cole/  
Primary Examiner, Art Unit 1794